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L7: Entry 6 of 10 File: JPAB Jun 15, 1992

PUB-NO: JP404167008A
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TITLE: VEHICLE POSITION DETECTION DEVICE

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ABSTRACT:

PURPOSE: To obtain highly accurate position data by finding the position of a vehicle relative to a carport by triangulation from the phase difference generated between the image formation positions of a 1st and a 2nd CCD sensor owing to the distance between the optical axes.

CONSTITUTION: The detection device is equipped with the 1st and 2nd CCD sensors 14 and 16 which photograph markers 104 and 106 through 1st and 2nd lenses 22 and 23 and an arithmetic means 28 which calculates the relative position (x, y) and azimuth angle ϕ to the carport with the detection signals according to equations I - IV. In the equations I - IV, m1 and m2 are the image formation positions of the 1st and 2nd indicators on the 1st CCD sensor 14, n1 and n2 the image formation positions of the 1st and 2nd indicators on the 2nd CCD sensor 16, Δx the element length of the 1st and 2nd CCD sensor 16, (f) the focal length of the lenses, L the distance between the 1st and 2nd indicators, and D the distance between the optical axes of the 1st and 2nd CCD sensors 14 and 16. Consequently, the vehicle position detection device which can measure a distance with high accuracy and applicable to an automatic parking device is obtained.